7. (Amended) The method according to [one of the preceding claims] claim 1, further characterized in that an amino function is introduced into the oligomers of the array and this binds to a glass surface derivatized by silanizing.

8. (Amended) The method according to [one of the preceding claims] claim 1, further characterized in that the oligomer array is produced by solid-phase synthesis of the oligomers on the second surface.

11. (Amended) The method according to [one of the preceding claims] claim 1, further characterized in that photolithographic methods and photolabile protective groups are used for the oligomer synthesis.

14. (Amended) The method according to [one of the preceding claims] claim 1, further characterized in that the oligomers are synthesized in an array of cavities, which are also used, if needed, as chambers for the hybridization.

15. (Amended) The method according to [one of claims] claim 1 [to 13], further characterized in that the nucleic acid fragments to be characterized are immobilized on an array of cavities, which are also used, if needed, as chambers for the hybridization.

16. (Amended) The method according to [one of the preceding claims] claim 1, further characterized in that chemical groups, which effect a change in mass and/or fluorescence, are used as labels for the oligomers.

17. (Amended) The method according to [one of the preceding claims] claim 1, further characterized in that the hybridized oligomers are detected by means of mass spectrometry, preferably by means of matrix-assisted laser desorption/ionization mass spectrometry (MALDI).